

REPLY UNDER 37 C.F.R. § 1.116 – EXPEDITED PROCEDURE – TECHNOLOGY CENTER 2800

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claim 1 (currently amended): A rotor for use in a high speed generator, the rotor comprising:
a shaft extending axially through the rotor;
a plurality of rotor poles extending radially away from the shaft, each rotor pole having an end face;

a plurality of spokes extending radially from a location along the shaft, each spoke radially aligned with, and coupled to, one of the rotor pole end faces;

a plurality of supports, wherein each one of the supports is positioned proximate at least partially surrounds a respective one of the spokes, and includes an inner face positioned proximate its respective spoke, and an outer face;

a plurality of coils of wire windings, each wrapped around a respective one of the support[s] outer faces and a respective one of the spokes; and

at least one cap device preventing the wire windings of the coils from moving outward away from the shaft beyond outer radial limits;

wherein each support is coupled to the at least one cap device, wherein each support extends radially inward along its respective spoke from the at least one cap device to at least a respective inner limit,

wherein each support includes at its respective inner limit a respective flange protruding away from the respective spoke, and wherein each flange prevents the wire windings of the respective coil from moving beyond the respective inner limit towards the shaft.

Claim 2 (original): The rotor of claim 1, wherein the supports are U-shaped brackets that curve around the respective spokes.

Claim 3 (original): The rotor of claim 2, wherein the supports are drawn towards the at least one cap device when the supports are coupled thereto, so that the wire windings of the respective coils experience pressure between the respective flanges and at least one outward protrusion of the at least one cap device.

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Claim 4 (original): The rotor of claim 1, wherein the supports are formed from a material selected from the group consisting of aluminum, titanium and steel.

Claim 5 (original): The rotor of claim 1, wherein the at least one cap device includes a plurality of cap hats that are respectively coupled to the respective spokes.

Claim 6 (original): The rotor of claim 5, wherein each cap hat is also respectively coupled to the respective support.

Claim 7 (original): The rotor of claim 6, wherein each cap hat is coupled to its respective spoke by two bolts, and each cap hat is further coupled to its respective support by two additional bolts.

Claim 8 (original): The rotor of claim 1, wherein the at least one cap device is a ring that is coupled to all of the spokes.

Claim 9 (original): The rotor of claim 1, wherein the plurality of poles includes four poles.

Claim 10 (original): The rotor of claim 1, wherein the rotor is configured for implementation as the rotor of a high-speed, main generator, and wherein the rotor is configured to receive field winding current for the wire coils from an exciter generator.

Claims 11-16 (canceled).

Claim 17 (currently amended): In a rotor including one or more rotor poles extending radially outward from a shaft of the rotor, each rotor pole including a face having a spoke radially aligned with, and coupled thereto, a method of retaining wires of a coil within a desired radial region relative to a shaft of the rotor, the method comprising:

positioning at least one of a support and an additional element on a first appendage extending radially from the shaft one of the spokes, wherein the at least one support and additional element includes a flange, an inner face positioned proximate the first spoke, and an outer face;

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wrapping the wires of the coil ~~onto~~ around the outer face of the support;
providing a cap hat proximate an outer end of the first appendage spoke away from the shaft; and
attaching at least one of the cap hat and the support to the first appendage spoke and, if only one of the cap hat and the support is attached to the first appendage spoke, further attaching the cap hat and the support to one another;
wherein the flange extends away from the first appendage spoke and prevents movement of the wires of the coil toward the shaft beyond an inner limit, and wherein the cap hat prevents movement of the wires away from the shaft beyond an outer limit.

Claim 18 (currently amended): The method of claim 17, wherein the cap hat is attached to the appendage spoke, and the cap hat is additionally attached to the support.

Claim 19 (currently amended): The method of claim 18, wherein the cap hat is attached to the appendage spoke by two bolts, and the cap hat is additionally attached to the support by two additional bolts.

Claim 20 (original): The method of claim 19, wherein the flange is provided on the support, and wherein the flange provides force to move at least some of the wires of the coil toward the cap hat as the support is attached to the cap hat by the two additional bolts.

Claim 21 (currently amended) The method of claim 17, wherein the cap hat and the support are both attached to the appendage spoke.

Claim 22 (original) The method of claim 17, wherein the additional element is a L-type bracket that includes the flange, wherein the coil includes an inner side and an outer side, wherein the support physically contacts the inner side of the coil, and wherein the L-type bracket is attached to the cap hat so that the bracket extends away from the cap hat toward the shaft on the outer side of the coil.

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Claim 23 (currently amended): The method of claim 17, further comprising:

positioning a second support on a second ~~appendage spoke~~ extending radially from the shaft opposite the first ~~appendage spoke~~;

wrapping wires of a second coil ~~onto~~ around the outer face of the second support ;

providing a second cap hat proximate a second outer end of the second ~~appendage spoke~~ away from the shaft;

attaching the second cap hat to the second ~~appendage spoke~~ and further attaching the second cap hat and the second support to one another; and

providing a second flange on the second support,

wherein the second flange extends away from the second ~~appendage spoke~~ and prevents movement of the wires of the second coil toward the shaft beyond a second inner limit, and wherein the second cap hat prevents movement of the wires of the second coil away from the shaft beyond a second outer limit.